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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,683

07/21/2006

Hiroyuki Tominaga

128187

4993

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7590

03/24/2008

OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

EDWARDS, LOREN C

ART UNIT

PAPER NUMBER

3748

MAIL DATE

DELIVERY MODE

03/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,683	<b>Applicant(s)</b> TOMINAGA, HIROYUKI	
	<b>Examiner</b> Loren C. Edwards	<b>Art Unit</b> 3748	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5 and 7 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/13/06</u> .   | 6) <input type="checkbox"/> Other: ____.                          |



## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 6/13/06 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, 5, and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tashiro et al. (U.S. 6,622,480). Tashiro discloses an exhaust gas control system for an internal combustion engine, comprising: an internal combustion engine (Fig. 1, E), a filter (Fig. 1, No. 4) for capturing particulate matter in exhaust gas discharged from the internal combustion engine, the filter being provided in an exhaust passage (Fig. 1, No. 2) for the internal combustion engine, wherein an entire range of an engine operating state decided by a rotational speed and torque of the internal combustion engine includes a first

operating state range (Fig. 17, D) where a temperature of the exhaust gas discharged from the internal combustion engine is low, and the particulate matter captured by the filter is not oxidized and an amount of the particulate matter deposited in the filter increases if a recovery process is not performed, and a second operating state range (Fig. 17, C1 and C2) where the temperature of the exhaust gas discharged from the internal combustion engine is high, and the particulate matter captured by the filter is oxidized and the amount of the particulate matter deposited in the filter decreases even if the recovery process is not performed, the exhaust gas control system further comprises a filter forced recovery portion (Fig. 8) that performs the recovery process that removes the particulate matter captured by the filter by forcibly oxidizing the particulate matter so as to recover a capturing ability of the filter; and a deposited amount detection portion (Fig. 8, Step 21) that detects an amount of the particulate matter that is captured by the filter and deposited in the filter, wherein: the filter forced recovery portion performs the recovery process when the amount of the particulate matter deposited in the filter which is detected by the deposited amount detection portion becomes equal to or larger than a predetermined amount (Fig. 8, Step 21 – when  $P_e$  is greater than  $P_{max}$ ) in a case where the operating state of the internal combustion engine belongs to the first operating state range; and the filter forced recovery portion performs the recovery process based on a continuous belonging time period during which the operating state of the internal combustion engine continues to belong to the second operating state range in a case where the operating state of the internal combustion engine

belongs to the second operating state range (Fig. 8, Step 21 – when PMs is greater than PMmax; Fig. 9; Fig. 15; Col. 14, Line 35 - Col. 15, Line 30).

5. With regards to claim 4, Tashiro discloses the exhaust gas control system of claim 1, as described above, and further wherein the filter forced recovery portion performs the recovery process (Fig. 8, Step 30) when an accumulated time period during which the operating state of the internal combustion engine belongs to the second operating state range after a previous recovery process is finished in a case where the operating state of the internal combustion engine belongs to the second operating state range (Fig. 8, Step 21 – when PMs is greater than PMmax; Fig. 9; Fig. 15; Col. 14, Line 35 - Col. 15, Line 30).

6. With regards to claims 5 and 7, Tashiro discloses the system of claims 1 and 4, which contain all of the essential claim elements of claims 5 and 7. The method to so perform is inherently included.

#### ***Allowable Subject Matter***

7. Claims 2, 3, and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loren C. Edwards whose telephone number is (571) 272-2756. The examiner can normally be reached on M-TH 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas E. Denion/  
Supervisory Patent Examiner, Art Unit 3748

/Loren Edwards/  
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